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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,507	03/09/2004	Ki Hwan Park	SAM-0526	1952
7590	02/16/2006			
Anthony P. Onello, Jr. MILLS & ONELLO LLP Suite 605 Eleven Beacon Street Boston, MA 02108			EXAMINER EL ARINI, ZEINAB	
			ART UNIT	PAPER NUMBER
			1746	
DATE MAILED: 02/16/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,507

Applicant(s)

PARK ET AL.

Examiner

Zeinab E. EL-Arini

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/08/05.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

The amendment and remarks filed on 12/05/05 have been acknowledged and entered.

Election/Restrictions

Applicant affirms the election of Group II, claims 26-38 has been acknowledged.

Specification

The objection to the abstract and the title stated in paper No. 090605 has been withdrawn in view of applicant's amendment.

Drawings

The drawings filed on 03/09/04 have been accepted by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elsayy et al. (6,328,809).

Elsawy et al. disclose a method of treating and drying a surface of a semiconductor substrate. The reference discloses providing a first supply of drying fluid, a second supply of drying fluid, storing a supply of decontaminating fluid in a decontaminating fluid tank, and supply the first supply of drying fluid and the supply of decontaminating fluid to process chamber to decontaminate semiconductor wafer. The

reference discloses the drying fluid is nitrogen gas, the decontaminated fluid (alcohol), the treating step, rinsing, and rapidly draining the rinsing fluid from the process chamber, The DIW, and the drying step as claimed. See the claims, Figs. 2-3, 4A. Elsayy discloses all limitation with the exception of the rate of supply of the second supply of drying fluid and the rate of supply of the first supply of drying fluid, and the simultaneously supplying the first supply of the drying fluid and the combination of the second supply of the drying fluid and decontaminating fluid to the process chamber as claimed.

It would have been obvious for one skilled in the art to adjust the rate of supply of the first drying fluid and the second drying fluid to obtain optimum results. One skilled in the art would supply the decontaminating fluid and the drying fluid simultaneously to improve the cleaning or processing steps, because the decontaminated fluid would clean the surface and the drying fluid will volatilize the condensed decontaminated fluid remaining on the surface of the wafers simultaneously, which reduce the processing time and therefore increase the process efficiency. See col. 5, lines 38-43. Re claim 35, it is well known in the art to discharge the rinsing fluid to a tank (72). See Fig. 4A, and col. 13, lines 57-60.

This rejection stated in paper No. 090605 is maintained.

Response to Arguments

1. Applicant's arguments filed 12/05/05 have been fully considered but they are not persuasive. Applicant's argument with respect to Elsayy does not teach the first controlled rate of supply and the second controlled rate of supply, and the step of

Art Unit: 1746

simultaneously supplying-----, is unpersuasive, because one skilled in the art would adjust the rate of supply to obtain optimum results. One skilled in the art would supply the decontaminating fluid and the drying fluid simultaneously to improve the cleaning or processing steps, because the decontaminated fluid would clean the surface and the drying fluid will volatilize the condensed decontaminated fluid remaining on the surface of the wafers simultaneously, which reduce the processing time and therefore increase the process efficiency. See col. 5, lines 38-43.

2. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the ratio of nitrogen gas to IPA gas in the process chamber is a critical factor during the IPA decontamination step) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1746

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeinab E. EL-Arini whose telephone number is (571) 272-1301. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zeinab E. EL-Arini
Zeinab E. EL-Arini
Primary Examiner
Art Unit 1746

ZEE
02/14/06